

Amendments to the Specification:

On page 2, please amend the paragraph spanning lines 8-13 as follows:

It is thus an object of the present ~~invention~~ application to provide an analysis apparatus and a corresponding analysis method which supply an analysis of a target comprised in the object to be examined more reliably, in particular avoiding the above described problems, having a better signal-to-background ratio and providing signals having a higher signal contribution of other analytes apart from hemoglobin than provided by the known analysis apparatus.

On page 2, please amend the paragraph spanning lines 14-21 as follows:

This object is achieved ~~according to the present invention~~ by an analysis apparatus ~~as claimed in claim 1~~ comprising:

- an excitation system for emitting an excitation beam to excite a target region,
 - a detection system for detecting scattered radiation from the target region generated by the excitation beam and for analyzing the scattered radiation,
- wherein only scattered radiation from blood in capillaries having a diameter below a predetermined diameter value and/or including an amount of red blood cells below a predetermined cell amount is analyzed.

On page 2, please delete the paragraph spanning lines 22-23 as follows:

~~The object is further solved by a corresponding analysis method as claimed in claim 18.~~

On page 2, please amend the paragraph spanning lines 24-33 as follows:

~~The present invention is based on the idea that spectroscopic~~
Spectroscopic analysis on small blood vessels such as capillaries in the skin just below the epidermal junction and/or on vessels having a low amount of red blood cells have specific advantages over analysis on whole blood, in large blood vessels or large amounts of blood cells. One analysis option is that only scattered radiation from selected vessel areas where are only small capillary vessels or vessels having a low amount of red bloods cells are present is detected and analyzed. Another analysis option, which can be employed additionally or alternatively, is to excite only those selected vessel areas or other predetermined areas where only small capillary vessels or vessels having a low red blood cell amount are present, such as in the upper dermis.

Please amend the paragraph starting on page 3, line 30 and continuing to page 4, line 5 as follows:

~~Preferred embodiments of the invention are defined in the dependent claims. A preferred embodiment for in vivo analysis is defined in claim 2, which further comprises:~~

- a monitoring system for emitting a monitoring beam to image the target region,
- an image processing unit for processing the image of the target region and for selecting vessel areas in the image showing capillary vessels or vessel portions having a diameter below a predetermined diameter value and/or including an amount of red blood cells below a predetermined cell amount, and
- a control unit for controlling the detection system to analyze only scattered radiation from the selected vessel areas and/or for controlling the excitation system to excite only the selected vessel areas or predetermined areas.

On page 4, please amend the paragraph spanning lines 6-8 as follows:

~~Preferred embodiments of the image processing unit are defined in claims 6 to 8.~~ For selecting only vessel areas in the image showing small vessels optical vessel tracking means are provided.

On page 4, please amend the paragraph spanning lines 26-28 as follows:

~~A preferred embodiment of the control unit is defined in claim 9.~~ The excitation system is thus controlled to excite only predetermined areas. For instance, in the upper dermis the penetration depth of the imaging technique is less than 300 μ m.

On page 4, please amend the paragraph spanning lines 29-33 as follows:

An embodiment of the analysis apparatus for in vitro analysis is ~~defined in claim 11 which~~ further comprises a sample holding system comprising a capillary carrier containing the blood to be analyzed. ~~Preferred embodiments thereof are defined in claims 12 and 13.~~ This in vitro analysis apparatus needs a little amount of blood, reduces scattering problems in whole blood, reduces reabsorption problems and has a high throughput.

On page 13, please amend the paragraph spanning lines 17-34 as follows:

~~Fig.14—~~Fig. 7 diagrammatically shows a further embodiment of the analysis apparatus according to the invention wherein the monitoring system is an orthogonal polarized spectral imaging arrangement. This embodiment combines imaging by OPSI and Raman spectroscopy. For orthogonal polarized spectral imaging

(OPSI) a light source is used at a specific wavelength band. To achieve this a white light source is filtered by a band pass filter (λ -Ftr). The light is linearly polarized by the polarizer (P). The light is then focused in the object by the objective lens (Obj). The reflected light is detected through an analyzer at orthogonal polarization orientation. This means that only depolarized light is detected which originates from multiply (diffusely) scattered light deep in the turbid object (tissue). The back scattering of these photons produces a sort of 'backlight illumination' which gives a more or less homogenous brightness in the image at the CCD detector (CCD see FIG. 1). By proper selection of the wavelength (λ -Ftr) corresponding to (partly) absorption in shallow objects (such as capillaries in skin) these objects in contrast appear dark (through absorption) on a bright background. A Raman excitation beam can be coupled in the OPSI image in a similar fashion as in confocal imaging using a filter or other beam combination unit. The advantage of OPSI is especially its compactness and low cost. As described with reference to the other embodiments a control unit for control of the excitation system (ls) and/or the detection system (dsy) are provided.

On page 13, after the last paragraph ending on line 34, please add the following new paragraph:

The invention has been described with reference to the preferred embodiments. Modifications and alterations may occur to others upon reading and understanding the preceding detailed description. It is intended that the invention be construed as including all such modifications and alterations insofar as they come within the scope of the appended claims or the equivalents thereof.